

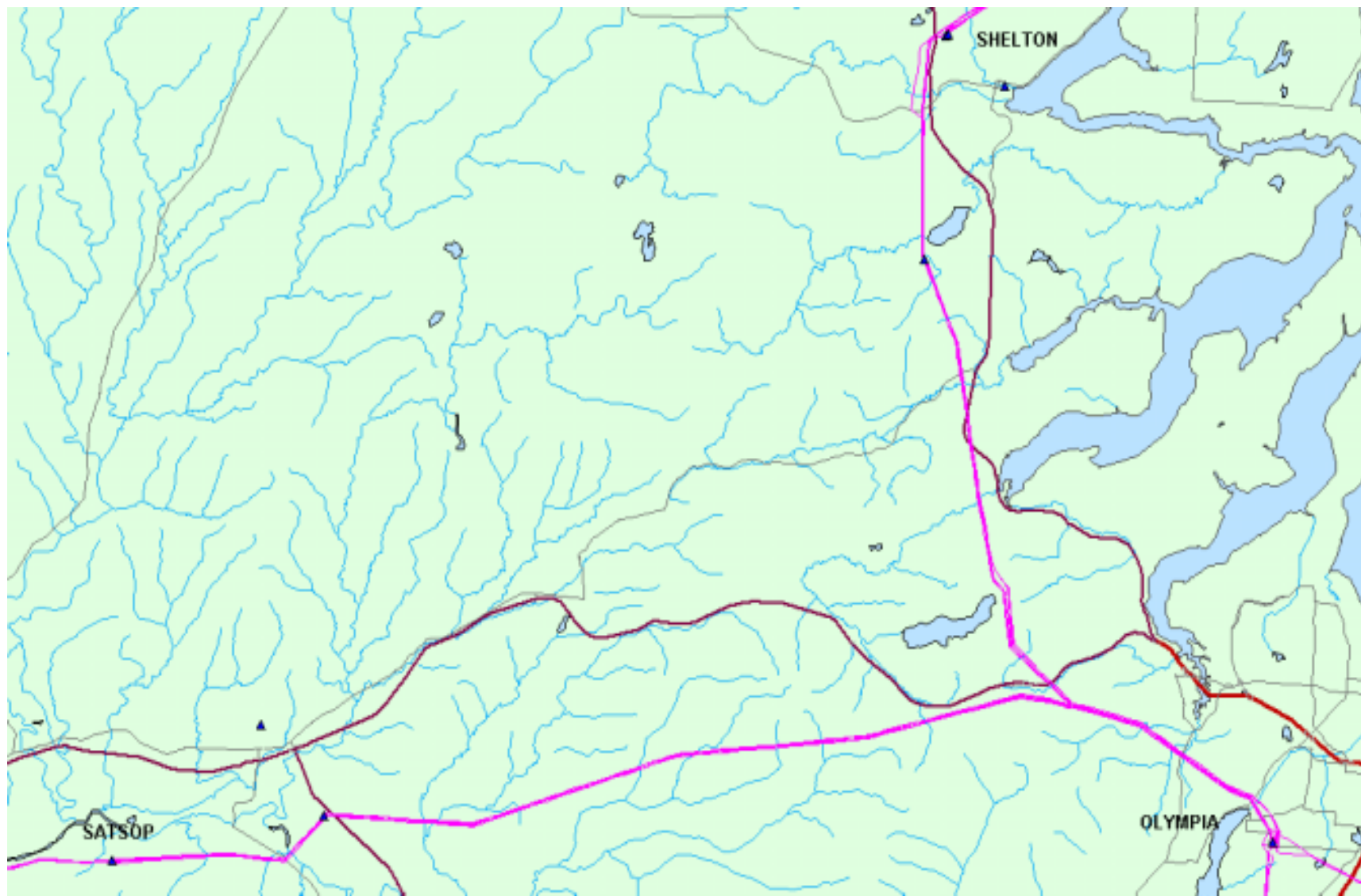
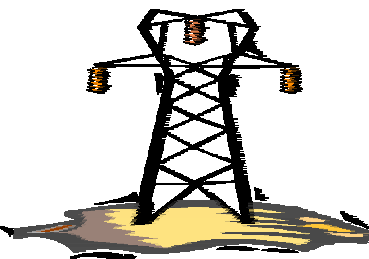
Olympic Peninsula Reinforcement Project and Non-Construction Alternatives Pilot

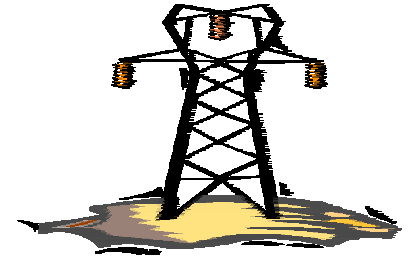
Bonneville



Power Administration

GEOGRAPHIC LOCATION

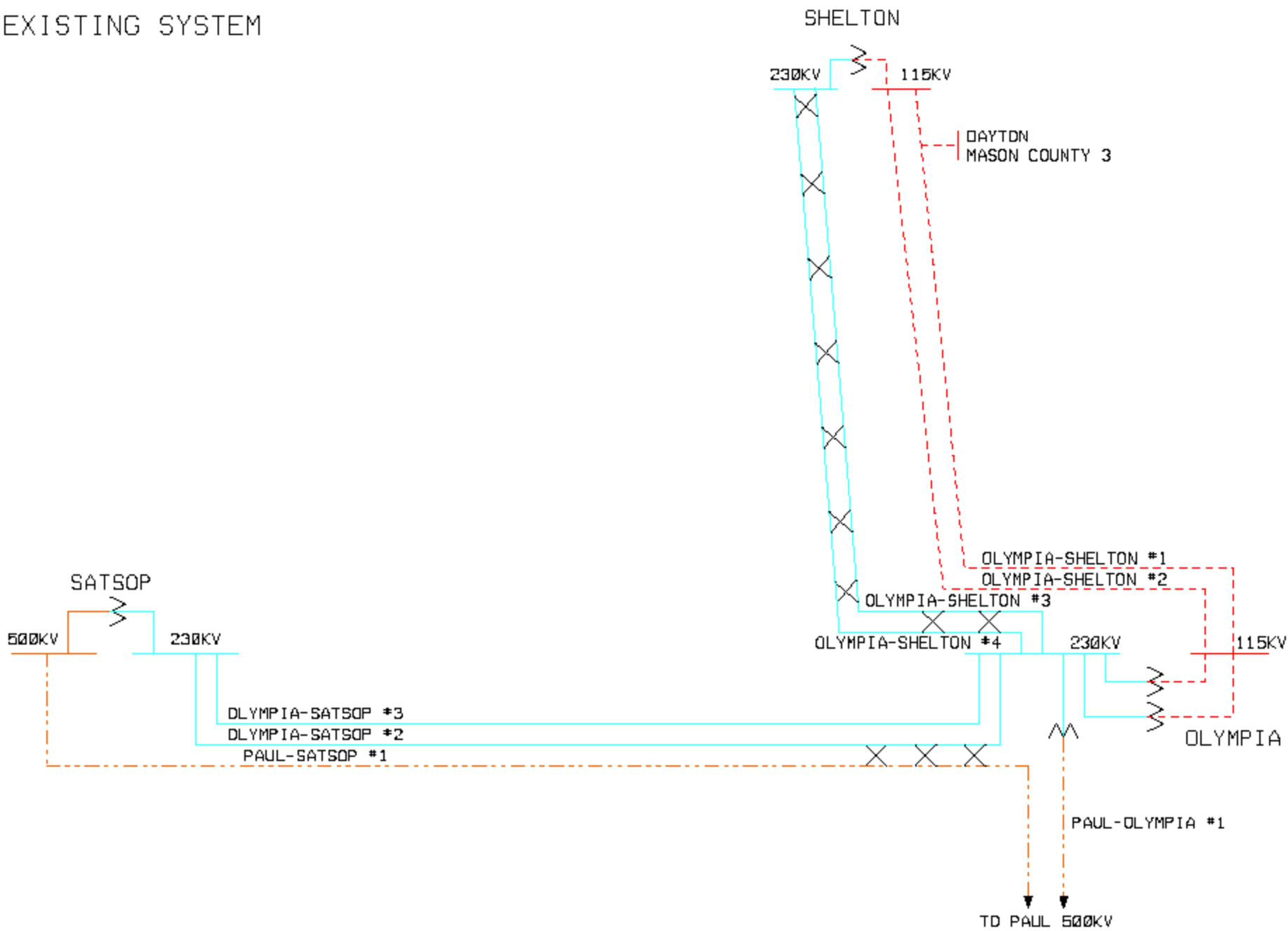




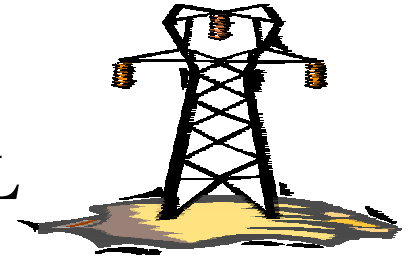
LIMITING OUTAGES WINTER LOADING

- **2006 Extra Heavy**
 - **Voltage Collapse of Peninsula**
- **2002 Normal (Present System)**
 - **Voltage Collapse of Peninsula under N-2**

EXISTING SYSTEM

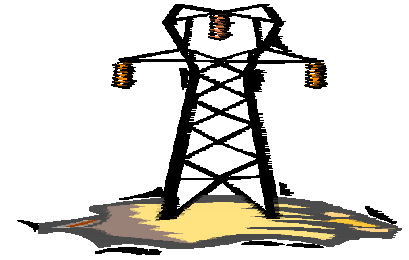


OLYMPIC PENINSULA TOTAL LOAD LEVELS



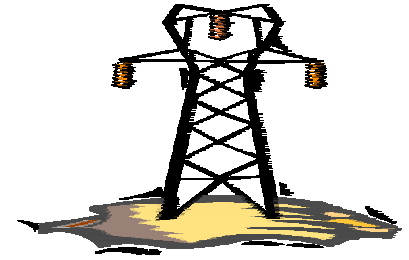
**Based on the loading on Olympia-Shelton 230 kV lines #3&4, Olympia-Shelton 115 kV lines #1&2
and Olympia-Kitsap 230 kV line #3
Loads modeled in the basecases developed in 2000
Normal Winter is 1 in 2
Extra Heavy Winter is 1 in 20**

- **2003**
 - **Summer – 589 MW**
 - **Normal Winter – 1157 MW**
 - **Extra Heavy Winter – 1349 MW**
- **2006**
 - **Summer – 626 MW**
 - **Normal Winter – 1230 MW**
 - **Extra Heavy Winter – 1473 MW**
- **2010**
 - **Normal Winter – 1337 MW**



CAPACITOR REINFORCEMENT

- **Addition of 41.1 MVAR at Fairmount 230 kV bus**
- **This will give us approximately 20 groups of shunt capacitors totaling 900 MVAR on the Peninsula.**
- **Fall of 2003 energization date.**
- **Further addition of shunt capacitors is not a viable solution to solve this problem.**

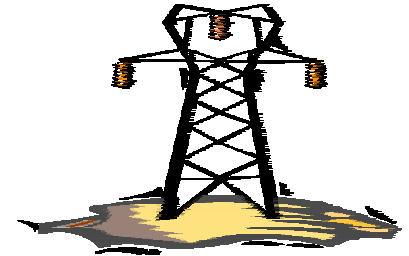


OPTIONS

- **Preferred Alternative**
 - **500/230 kV Transformer at Shelton**
 - **Construction of 14 miles of 500 kV line to Shelton and 6 miles of 230 kV line to Olympia.**
 - **\$25 Million**
 - **Fall of 2005 Energization Date**
 - **Next major system reinforcement would be in 2013.**

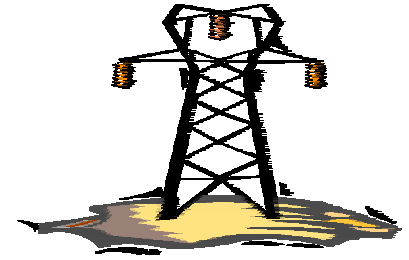
- **Alternative 2**
 - **2nd 500/230 kV Transformer at Olympia**
 - **Construct 20 miles of 230 kV line to Shelton**
 - **\$16 Million**
 - **Next major system reinforcement would be in 2009.**

- **Alternative 3**
 - **Load Shedding**
 - **Demand-Side Management**



Alternative 3 – Load Shedding/Demand Side Management

- **For N-2,**
 - **Need to shed 300 MW in winter.**
 - **Increases approximately 20 MW per year due to load growth.**
- **For Olympia 500/230 kV bank outage can serve up to 1352 MW**
 - **Need to start curtailing approximately 30 MW per year starting in 2006.**



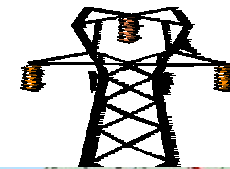
Olympic Peninsula Pilot

- Object is to Reduce demand or generate power at strategic points to reduce line loading when needed
- OPTIONS
 1. Market Based or contracted demand reductions via Demand Exchange
 2. Utility aggregated Demand reductions or generation
 3. peaking plant (under variety of owner/operator schemes)

Bonneville



Power Administration



Review/Set Times
as of 14:11, Wednesday, February 26, 2003

Please review the start/end times and make all necessary changes.

Event Type	Start Time	End Time
<input type="radio"/> Day Of	[Select Time] ▼	[Select Time] ▼
<input checked="" type="radio"/> Day Ahead	4:00:00 AM ▼	8:00:00 AM ▼
<input type="radio"/> 2-Days Ahead	[Select Time] ▼	[Select Time] ▼

Next

Review/Post Prices

as of 14:14, Wednesday, February 26, 2003

**Please review the prices and make all necessary changes.
Remember that all prices are per Megawatt Hour (MWh).**

Day Ahead	Thursday, February 27, 2003
	Enter (\$/MWh) for all hours
Hours	<input type="text" value="180"/>
4-5am	<input type="text" value="180"/>
5-6am	<input type="text" value="180"/>
6-7am	<input type="text" value="180"/>
7-8am	<input type="text" value="180"/>

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Review/Confirm Prices

as of 14:15, Wednesday, February 26, 2003

Please review and confirm the prices.
Remember that all prices are per Megawatt Hour (MWh).

Day Ahead	Thursday, February 27, 2003
Hours	(\$/MWh)
4-5am	\$180.00
5-6am	\$180.00
6-7am	\$180.00
7-8am	\$180.00

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Event Notification Selection

Check the participant(s) you wish to notify.

To sort the list, click on the appropriate heading. Click again to re-sort.

Notify All <input type="checkbox"/>	Participants	SiteID	Status	Utility Aggregator	Generation	Process	HVAC	Other	Total MW
<input type="checkbox"/>	City Of McMinnville	Cascade Steel Mill, Furnace And Ladle, M	Active	No	0	42	0	0	42.00
<input type="checkbox"/>	Milton-Freewater City Light & Power		Active	No	0	0	5	0	5.00
<input type="checkbox"/>	Plum Creek Mdf, Inc.	Columbia Falls, Montana	Active	No	0	0	0	12	12.00
<input type="checkbox"/>	Test Company	Test Site	Active	No	10	15	8	0	33.00
TOTAL MW -->					10.00	57.00	13.00	12.00	92.00

Notify

The Power of Customer Choice™

POWERED BY THE DEMAND EXCHANGE™
Trading Platform
a Division of APOGEE Interactive, Inc.

Group Event Notification Selection

SELECT GROUP(S)

Discretionary Load (MW)

- ☐ 1 - 5
- ☐ 5 - 10
- ☐ 10 - 30
- ☐ > 30

Exclusions

- ☐ Utility Aggregators

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Notify

The Power of Customer ChoiceSM

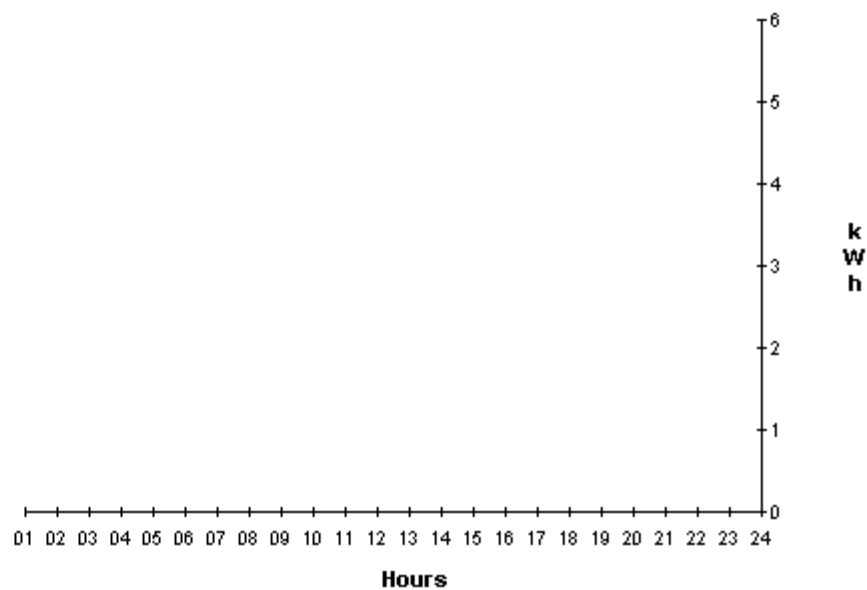
POWERED BY **THE DEMAND EXCHANGE**
Trading Platform
a Division of APOGEE Interactive, Inc.



Company Listing:

Test Company

Energy Usage vs. Load Reduction Plan for - Wed, 2/26/2003



« Prev

Latest Data

Select Date: 2/26/2003

